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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,904	09/20/2005	Takayuki Kato	Q90376	7150
65565	7590	03/04/2008	EXAMINER	
SUGHRUE-265550			ROBINSON, ELIZABETH A	
2100 PENNSYLVANIA AVE. NW			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20037-3213			1794	
MAIL DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/549,904	<b>Applicant(s)</b> KATO ET AL.
	<b>Examiner</b> Elizabeth Robinson	<b>Art Unit</b> 1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

1) Responsive to communication(s) filed on 06 December 2007.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

4) Claim(s) 1-9 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-9 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

#### **DETAILED ACTION**

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-9 are currently pending.

#### ***Specification***

The Examiner approves the amendment to the specification filed on December 6, 2007.

#### ***Claim Rejections - 35 USC § 102/103***

Claims 1-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kato et al. (JP2003-160330). A formal English translation of this document is provided with this Office Action.

Regarding claims 1 and 2, Kato (Paragraphs 27-28, Example 2) teaches an almost identical process for making a hollow ceramic particle as is used in the Example of the instant application. The only difference between the method of Example 2 and the Example of the instant application is the rotation speed of the chamber. In Example 1, Kato (Paragraph 21) teaches the identical rotation speed for the chamber as in the instant application. The hollow particles are preferably 20 microns or less in diameter (Paragraph 6). The materials of Example 2 are identical to the materials of the Example of the instant application. Kato does not explicitly teach the breaking strength or shell thickness of the particles. However, since the materials and machinery of Kato are

identical to the instant application, the particles should inherently meet the limitations of the instant claim. Alternately, if the rotation speed has an effect on the particle properties, it would be obvious to one of ordinary skill in the art to vary the rotational speed to another speed that is taught in Example 1 to obtain desired properties.

Regarding claim 3, Kato (Paragraph 21, Example 1) teaches two different sizes of alumina powders. Kato (Paragraph 27, Example 2) further teaches silica and alumina particle used together.

Regarding claims 4-6, 8 and 9, Kato (Paragraph 7) teaches that the alumina powders are partially embedded in the resin powder and are then sintered. Kato (Paragraph 2) teaches that the spheres can be dispersed in a metal matrix.

Regarding claim 7, all materials have some degree of sliding capability and thus, the metal matrix with the hollow ceramics particles can be considered a sliding member.

#### ***Response to Arguments***

Applicant's arguments filed December 6, 2007 have been fully considered but they are not persuasive.

Applicant argues that Kato et al. (JP2003-160330) is not a valid 35 U.S.C. 102(b) reference, due to the filing date of the PCT in the instant case. However, the PCT was not filed in English and thus, the filing date, for 35 U.S.C. 102(b) purposes, is the US filing date of September 20, 2005. The filing date of JP2003-160330 is June 3, 2003, which is more than one year before the US filing date.

Due to amendments to the claims, the Examiner withdraws the claim objections from the September 6, 2007 Office Action.

Due to amendments to the claims, the Examiner withdraws the 35 U.S.C. 112 rejection of claim 4 from the September 6, 2007 Office Action.

Applicant's amendment to claim 4 no longer requires the matrix into which the particles are dispersed to be a resin matrix. Thus the 35 U.S.C. 103 rejection of claim 4 from the September 6, 2007 Office Action is withdrawn and replaced with the rejection as stated in this Office Action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Robinson whose telephone number is (571)272-7129. The examiner can normally be reached on Monday- Friday 8 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ear  
/E. R./  
Examiner, Art Unit 1794

/Carol Chaney/  
Supervisory Patent Examiner, Art Unit 1794